

Storm Sewer Design

10 yr. Storm

Project: Holiday Inn Express
Job No.: 15M040-000

Formulas Used:
Q_r = ACI
V_p = 1.486 R^{2/3} S^{1/2}/n
Q_p = A_p V_p

Bayer Becker Engineers

Designed By: MJL Date: 09/13/16
Reviewed By: Date:
Revisions: Date:

Revisions: Date:
Revisions: Date:
Revisions: Date:

LOCATION			TOPOGRAPHY					TIME		Min. Tc= 10		DESIGN												Constant n value: 0.015		
Street	From Structure	To Structure	Area No.	Area (acres)	"C"	Contributing Area	Composite C	T-inlet (min.)	T-upstr (min.)	T_c-conc. (min.)	Intensity (in./hr.)	Q_r (c.f.s.)	Pipe Size (inches)	"n"	Distance (ft.)	Slope (%)	Velocity (ft./sec)	Q_p (c.f.s.)	Flow Time (min.)	T/Grate	Inlet Invert	Outlet Invert	Inlet Clearance			
	1	2		0.00	0.40	0.00	0.40	10.00	10.00	10.00	5.15	0.00	12	0.015	115	1.79	5.27	4.14	0.36	898.47	894.92	892.85	2.55			
	2	3		0.31	0.90	0.31	0.90	10.00	10.36	10.36	5.10	1.42	12	0.015	100	0.50	2.78	2.18	0.60	896.33	892.85	892.35	2.48			
	3	4		0.09	0.90	0.40	0.90	10.00	10.96	10.96	5.01	1.80	12	0.015	158	0.50	2.78	2.18	0.95	896.72	892.35	891.56	3.37			
	4	13		0.16	0.90	0.56	0.90	10.00	11.91	11.91	4.87	2.45	15	0.015	84	0.50	3.23	3.96	0.43	896.47	891.32	890.90	3.90			
	13	14		0.47	0.90	1.47	0.90	10.00	12.34	12.34	4.81	6.36	72	0.015	12	0.50	9.18	259.54	0.02	896.21	888.17	888.11	2.04			
	10	11		0.19	0.90	0.19	0.90	10.00	10.00	10.00	5.15	0.88	12	0.015	148	0.50	2.78	2.18	0.89	896.66	893.18	892.44	2.48			
	11	12		0.16	0.90	0.35	0.90	10.00	10.89	10.89	5.02	1.58	12	0.015	124	0.50	2.78	2.18	0.74	896.90	892.44	891.82	3.46			
	12	13		0.44	0.90	0.79	0.90	10.00	11.63	11.63	4.91	3.49	72	0.015	108	0.30	7.11	201.04	0.25	896.18	888.49	888.17	1.69			

Plot time: Sep 13, 2016 - 11:41am
Drawing name: J:\2015\15M040-000\CD\15M040-000 CD HIX.dwg - Layout Tab: DR2



THE FIELDS AT LIBERTY WAY
HOLIDAY INN EXPRESS
COX ROAD & LIBERTY WAY
WEST CHESTER TOWNSHIP
BUTLER COUNTY, OH
SECTION 12, 18, TOWN 3, RANGE 2

bayer becker
15000 N. Main Street
Mason, OH 45040 - 513.355.6600

0 20 30
SCALE: 1" = 20'

North Arrow

Item	Revised	Description	Date	Drawn	CHK
1		PRELIMINARY DEVELOPMENT PLAN SUBMITTAL	09-13-16	MJL	
2					
3					
4					
5					
6					
7					
8					

Drawing: 15M040-000 CD HIX
Drawn by: MJL
Checked By:
Issue Date: 09-13-16

Sheet **DR2**

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